UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,753	10/30/2003	Yang Hoon Kim	HI-0182	6170

34610 7590 11/27/2007

KED & ASSOCIATES, LLP
P.O. Box 221200
Chantilly, VA 20153-1200

EXAMINER	
MOON, SEOKYUN	
ART UNIT	**PAPER NUMBER**
2629	

MAIL DATE	DELIVERY MODE
11/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/695,753	KIM, YANG HOON	
	Examiner	Art Unit	
	Seokyun Moon	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 18-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 18-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 23-26 have been amended to overcome the rejections under 35 U.S.C. 112, first paragraph made in the previous Office Action. Accordingly, the rejections have been withdrawn.

2. Claim 28 has been amended to overcome the objection made in the previous Office Action. Accordingly, the objection has been withdrawn.

Response to Arguments

3. The Applicants' arguments filed on October 18, 2007 have been fully considered.

Regarding the rejection of claims 1, 10, 16, and 20,

The Applicants pointed out, "*in paragraph 34 of page 9, AAPA does not disclose the controlling step. Rather, this paragraph merely discloses adapting brightness control information related to a power mode previously used, irrespective of each power mode*" [the Applicants' Remark: pg 17 lines 18-20, contrary to the Examiner's statement made in the previous Office Action: pg 6 lines 11-12].

Examiner respectfully disagrees.

AAPA [pg 9 paragraph (34)] teaches controlling the brightness level of the display ("*LCD brightness is automatically adjusted*") based on the brightness control information ("*index information*") independently stored in the second memory area (the index information stored in "*CMOS-RAM 180*" is independent from the information stored in "*Micom-ROM 200*") [fig. 4]. Furthermore, since the index information ("*110*") stored in the second memory ("*CMOS-RAM 180*") is used for both of AC adapter power mode and the battery power mode (in the AC adapter mode, the brightness of 140% is outputted while, in the battery power mode, 120% is outputted), the brightness control information stored in the second memory is for both of AC adapter mode and the battery power mode. Accordingly, AAPA does

teach the claim limitation, "*controlling the brightness level of the display based on the brightness control information independently stored in the second memory area for the confirmed power mode*".

The Applicants further pointed out that the "*inherency*" statements made in the previous Office Action is not proper [the Applicants' Remark: pg 15 – pg 17].

Examiner respectfully disagrees.

The Applicants pointed out, "*When applied to the rejection of claim 1, the storing step of claim 1 must therefore necessarily be present in the Loughran method, i.e., there can be no other possible ways of performing power management other than the way recited in claim 1. However, this clearly is not the case*" [Applicants' Remark: pg 15 lines 8-11]. However, the idea of the inherency disclosed in the previous Office Action is not based on how to perform power management but is based on the fact that having different power profiles in a device requires storing the different power profiles in different locations of the memory of the device. Please refer to the following statements to see how the "inherency" statement is derived regarding the claim limitation.

Statement 1

1-1) Loughran teaches storing different power management behaviors for different power management modes [par. (0062) lines 12-27, emphasis on lines 20-27].

1-2) Loughran teaches the power management behaviors comprising backlight control information [par. (0068)].

1-3) Loughran teaches the power management modes comprising modes depending on the type of the power source [par. (0008)].

Based on 1-1, 1-2, and 1-3, Loughran teaches storing different backlight control information for modes depending on different power source.

Loughran inherently teaches storing different backlight control information for modes depending on the type of power source in a memory since there must be a means for storing the backlight control

information in the device of Loughran and any information storage device implemented in an electronic circuitry is called as a memory.

Statement 2

2-1) Loughran teaches providing different power management behaviors dependent on the type of power source [par. (0008)].

2-2) Loughran further teaches the power management behaviors comprising backlight control information [par. (0068)].

Based on 2-1 and 2-2, Loughran teaches providing different backlight control information dependent on the type of power source.

Statement 3

Based on statements 1 and 2, Loughran inherently teaches storing different backlight control information in different locations of a memory for different power sources since if different backlight control information is stored in the same location of a memory, it is not possible to provide different backlight control information dependent on the type of power source.

Accordingly, the Examiner respectfully submits that the "*inherency*" statements made in the previous Office Action is proper.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-16** and **18-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art (herein after "*AAPA*") in view of Loughran (US 2003/0134632).

As to **claim 1**, AAPA [Appl. fig. 4] teaches a method for adjusting a brightness level of a display used in a portable computer system [Appl. pg 6 par. (21)], the method comprising:

separately storing, in a first memory area ("*Micom-Rom 200*") [Appl. fig. 4], brightness control information for a plurality of brightness levels for each of at least two power mode types ("*AC adaptor power mode" and "Battery power mode*");

reading out brightness control information in a first power mode for an adjusted one of the levels and in a second power mode for an adjusted one of the levels from the first memory area [pg 8 par. (31) lines 1-5];

storing, in a second memory area ("*CMOS-RAM 180*"), the brightness control information read out from the first memory area for the first and second power modes [pg 8 par. (31) lines 5-9];

confirming a type of power mode currently being used out of the first and the second power mode types [pg 9 par. (34)]; and

controlling the brightness level of the display based on the brightness control information independently stored in the second memory area for the confirmed power mode [pg 9 par. (34)].

AAPA does not teach the method comprising respectively storing the brightness control information read out from the first memory area for the first and second power modes, in different locations of a second memory area.

However, Loughran teaches a method of storing a different power profile [par. (0062) lines 12-27] which comprises brightness level control [par. (0068)], for each of a plurality of different device states / modes such as a mode used when the computer is operated with battery and a mode used when the computer is operated with AC adaptor [par. (0008)], and of controlling the device operation according to the power profiles depending on a present operational state or mode [par. (0011)]. Furthermore, Loughran inherently teaches that the brightness level controls for the first power mode type and the second power mode type are stored at different locations of RAM ("RAM" included in "memory 11") [fig. 1] since it is

required for the device of Loughran to hold a plurality of brightness level controls in the memory simultaneously and it is not possible to hold the plurality of brightness level controls at the same location simultaneously.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Loughran's idea of storing a different power profile including brightness level control in a RAM, for each of a plurality of different device-modes including AC adaptor mode and battery mode, to the display of AAPA, by modifying the RAMs of AAPA to store the different power profiles for different device-modes, in order to optimize the effectiveness of the display of AAPA for an user who operates the device in different contexts / modes [par. (0005)].

As to **claim 2**, AAPA as modified by Loughran teaches the method comprising adjusting the brightness level of a LCD using an input device, wherein the type of power mode currently being used includes at least one of an AC adaptor and a supplementary battery mode [Appl. pg 8 par (31) lines 1-5].

As to **claim 3**, AAPA as modified by Loughran teaches that the type of power mode currently being used includes at least one of an AC adaptor mode and a supplementary battery mode when power of the portable computer system is switched to a power on mode from a power off mode [Appl. pg 9 par. (33)].

As to **claim 4**, AAPA as modified by Loughran teaches that when the power mode type currently being used in the portable computer system is changed to a different power mode type, the changed power mode type includes at least one of an AC adaptor mode and a supplementary battery mode [Appl. pg 9 par. (33)].

As to **claim 5**, AAPA as modified by Loughran [Appl. fig. 4] teaches that when a power supply being confirmed is a supplementary battery, the brightness level of the display is adjusted by using an index information corresponding to the brightness levels in a battery power mode [Appl. pg 8 par. (31)],

wherein the index information is read out from the second memory area including at least a microcomputer random access memory or a system initialization RAM [Appl. fig. 4].

As to **claim 6**, AAPA as modified by Loughran teaches that when a power supply being confirmed is an AC adaptor, the brightness level of the display is adjusted by using an index information corresponding to the brightness levels in an AC adaptor power mode [Appl. pg 8 par. (31)], wherein the index information is read out from the second memory area including at least a microcomputer random access memory or a system initialization RAM [Appl. fig. 4].

As to **claim 7**, AAPA as modified by Loughran teaches the index information corresponding to the brightness levels in the AC adaptor power mode and the index information corresponding to the brightness levels in the battery power mode are independent and respectively stored in the first memory area [Appl. fig. 4].

As to **claim 8**, AAPA as modified by Loughran [Appl. fig. 4] teaches that the index information corresponding to the brightness levels in the AC adaptor power mode and the index information corresponding to the brightness levels in the battery power mode are separately stored in a microcomputer memory of the personal computer system and in a system initialization RAM, the microcomputer memory including the first memory area [Appl. pg 7 par. (28) and pg 8 par. (32)] and the system initialization RAM (Loughran: "*RAM*" included in the "*memory 11*") [Loughran: fig. 1] including the second memory area.

As to **claim 9**, AAPA as modified by Loughran teaches that when a power supply being confirmed is an AC adaptor, the brightness level of the display is adjusted by using an index information corresponding to the brightness levels in an AC adaptor power mode [Appl. pg. 8 par. (31)].

As to **claim 10**, AAPA [Appl. fig. 4] teaches a method comprising:

independently storing, in a first storage area ("*Micom-ROM 200*"), brightness level information for a plurality of power supplies ("*AC adaptor*" and "*Battery*") in a computer system;

reading out the brightness level information from the first storage area for first power supply and brightness level information from the first storage area for a second power supply [pg 8 par. (31) lines 1-5];

determining a type of power supply currently being used among the plurality of power supplies in the computer system when a brightness level of a display is adjusted [pg 8 par. (31) lines 1-5];

selecting brightness level information from the independently stored information in a first storage area, the selected brightness level information corresponding to the determined power supply type for the adjusted brightness level of the display, the determined power supply type corresponding to one of the first or second power supplies [pg 8 pars. (31) and (32)];

reading index information corresponding to the selected brightness level information [pg 8 par. (32)];

driving the adjusted brightness level of the display based on the readout index information [Appl. pg 8 par. (32)]; and

updating the second storage area to independently store the index information according to the determined type of power supply [pg 8 par. (32)].

respectively storing, in different locations of a second storage area, brightness level information read out from the first storage area for a first power supply and brightness level information read out from the first storage area for a second power supply [as discussed with respect to the rejection of claim 1].

AAPA does not teach the method comprising respectively storing the brightness control information read out from the first memory area for the first and second power modes, in different locations of a second memory area.

However, Loughran teaches a method of storing a different power profile [par. (0062) lines 12-27] which comprises brightness level control [par. (0068)], for each of a plurality of different device states / modes such as a mode used when the computer is operated with battery and a mode used when the

computer is operated with AC adaptor [par. (0008)], and of controlling the device operation according to the power profiles depending on a present operational state or mode [par. (0011)]. Furthermore, Loughran inherently teaches that the brightness level controls for the first power mode type and the second power mode type are stored at different locations of RAM ("RAM" included in "memory 11") [fig. 1] since it is required for the device of Loughran to hold a plurality of brightness level controls in the memory simultaneously and it is not possible to hold the plurality of brightness level controls at the same location simultaneously.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Loughran's idea of storing a different power profile which comprises brightness level control in RAM, for each of a plurality of different device states / modes, to the display of AAPA in order to optimize the effectiveness of the display of AAPA for an user who operates the device in different contexts / modes [par. (0005)].

As to **claim 11**, AAPA as modified by Loughran teaches that at least one of an index information corresponding to an adjusted brightness level in an AC adaptor power mode and an index information corresponding to an adjusted brightness level in a battery power mode is separately stored in the second storage memory [as discussed with respect to the rejection of claims 1 and 10].

As to **claim 12**, AAPA as modified by Loughran teaches the method comprising changing from a first power supply being an AC adaptor to a second power supply being a battery, wherein the driving the adjusted brightness level of the display comprises referring to an index information in a battery power mode, and wherein the index information is separately stored in second storage area [Appl. pg 9 par. (35)].

As to **claim 13**, AAPA as modified by Loughran teaches the method comprising changing from the battery to the AC adaptor, wherein the driving the adjusted brightness level of the display comprises

referring to an index information in an AC adaptor power mode, and wherein the index information is separately stored in the second storage area [Appl. pg 9 par. (34)]

As to **claim 14**, AAPA as modified by Loughran teaches the method comprising turning on power of the computer system after the power was turned off, wherein the driving the adjusted brightness level of the display comprises confirming the type of power supply currently being used, and reading out of the second storage area index information in an AC adaptor power mode or in a battery power mode [Appl. pg 8 par. (32)], wherein the index information stored in the second memory is independently stored in the different locations according to the AC adaptor power mode or the battery mode (as discussed with respect to the rejection of claim 10).

As to **claim 15**, AAPA as modified by Loughran teaches the brightness level of the display being adjusted automatically, periodically or using an input device by a user [Appl. pg 8 par. (31) lines 1-5]

As to **claim 16**, all of the claim limitations have already been discussed with respect to the rejection of claims 1 and 10.

As to **claim 18**, AAPA as modified by Loughran teaches the method comprising adjusting the brightness level of a LCD using an input device, wherein the type of power mode currently being used includes at least one of an AC adaptor mode and a supplementary battery mode [Appl. pg 8 par. (31) lines 1-5].

As to **claim 19**, AAPA as modified by Loughran teaches that the index information stored in the second storage area in the AC adaptor mode corresponds to a brightness level different than a brightness level corresponding to the index information stored in the second storage area in the supplementary battery mode [par. (0008) and par. (0062) lines 13-28].

As to **claim 20**, AAPA [pg 7 par. (27)] teaches an apparatus that controls an inverter pulse width modulation frequency of a liquid crystal display in a portable computer, comprising:

a first storage area ("*ROM 200*") [fig. 4] configured to separately provide LCD brightness level information for a plurality of brightness levels for each of at least two power mode types [pg 7 par. (28)];

a second storage area ("*RAM 180*") configured to store the brightness level information in a first power mode for an adjusted one of the levels and in a second power mode for an adjusted one of the levels read out from the first storage area;

an inverter ("*inverter 33*") [fig. 3] configured to supply a voltage to the LCD [pg 7 par. (27) lines 3-4]; and

a control circuit ("*micom 20*") for controlling a PWM frequency of the inverter to achieve a designated brightness level based on the LCD brightness level information independently stored in the second storage area for a current power supply mode [pg. 7 par. (27) lines 5-8].

AAPA does not teach the second storage area configured to respectively store the brightness level information in a first power mode for an adjusted one of the levels and in a second power mode for an adjusted one of the levels read out from the first storage area, in different locations.

However, Loughran teaches a method of storing a different power profile [par. (0062) lines 12-27] which comprises brightness level control [par. (0068)], for each of a plurality of different device states / modes such as a mode used when the computer is operated with battery and a mode used when the computer is operated with AC adaptor [par. (0008)], and of controlling the device operation according to the power profiles depending on a present operational state or mode [par. (0011)]. Furthermore, Loughran inherently teaches that the brightness level controls for the first power mode type and the second power mode type are stored at different locations of RAM ("RAM" included in "memory 11") [fig. 1] since it is required for the device of Loughran to hold a plurality of brightness level controls in the memory simultaneously and it is not possible to hold the plurality of brightness level controls at the same location simultaneously.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Loughran's idea of storing a different power profile which comprises brightness level control in RAM, for each of a plurality of different device states / modes, to the display of AAPA in order to optimize the effectiveness of the display of AAPA for an user who operates the device in different contexts / modes [par. (0005)].

As to **claim 21**, AAPA as modified by Loughran [Appl. fig. 4] teaches the LCD brightness level information including index information [pg 7 par. (28)].

As to **claim 22**, AAPA as modified by Loughran [Appl. fig. 4] teaches the first ("*ROM 200*") and second storage devices ("*RAM 180*") being different memories.

As to **claim 23**, AAPA as modified by Loughran teaches the respectively storing including independently storing, in the different locations of the second memory area, the brightness control information read out from the first memory area for the first and second power modes, wherein the brightness control information for the first and second power modes are stored simultaneously in the different locations of the second memory (as discussed with respect to the rejection of claim 1, Loughran inherently teaches storing the brightness control information in the different locations of the second memory area).

As to **claim 24**, all of the claim limitations have already been discussed with respect to the rejection of claims 1 and 23.

As to **claim 25**, all of the claim limitations have already been discussed with respect to the rejection of claims 1 and 23.

As to **claim 26**, all of the claim limitations have already been discussed with respect to the rejection of claims 16 and 25.

As to **claim 27**, AAPA as modified by Loughran [AAPA: fig. 4] teaches the brightness control information stored in the first memory area ("*Micom-Ram 200*") for the first power mode lies ("*AC*

adaptor power mode") within a first percentage range (20% - 160%) and the brightness control information stored in a first memory area for the second power mode ("*battery power mode*") lies in a second range (0% - 140%) having a different brightness percentage range.

As to **claim 28**, AAPA as modified by Loughran teaches storing the brightness control information for the first and second power modes in an auxiliary memory (AAPA: "*CMOS-RAM 180*") [AAPA: fig. 4 and pg 8 par. (32)] and transferring the brightness control information stored in the auxiliary memory to the respective different locations in the second memory area (the modified "*Micom-RAM 201*" as discussed with respect to the rejection of claim 1) when the computer system is turned on after it has been turned off [AAPA: pg 8 par. (32)].

As to **claim 29**, AAPA as modified by Loughran teaches the brightness control information for the first and second power modes being stored simultaneously into locations of a microcomputer random access memory ("*Micom-RAM(201)*") [AAPA: fig. 4] and a system initialization RAM ("*CMOS-RAM(180*") (note that in the rejection of claim 1, the RAMs of AAPA are modified to include brightness control information for a plurality of power modes instead of a single power mode).

As to **claims 30-32**, all of the claim limitations have already been discussed with respect to the rejection of claim 29.

As to **claim 33**, AAPA as modified by Loughran teaches the method comprising:

detecting a change in a power mode currently being used (Loughran: having different power management behaviors for different power management modes, par. [0062] lines 12-27, emphasis on lines 20-27); and

reading out brightness control information corresponding to the changed power mode from the second memory [AAPA: pg 9 paragraph (34)], wherein the brightness control information corresponding to the changed power mode is independently stored in different locations of the second memory (note that in the rejection of claim 1, the RAMs of AAPA are modified to include brightness control information for

a plurality of power modes instead of a single power mode), which includes at least one of a microcomputer random access memory or a system initialization RAM.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (572) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 20, 2007

- s.m.

AMR A. AWAD
SUPERVISORY PATENT EXAMINER